SOFT DRINKS □ BEER □ BOTTLED WATER □ WINE □ POWDERS □ JUICES □ SPIRITS

AUGUST 27, 1982

Beverage Industry

A HBJ PUBLICATION

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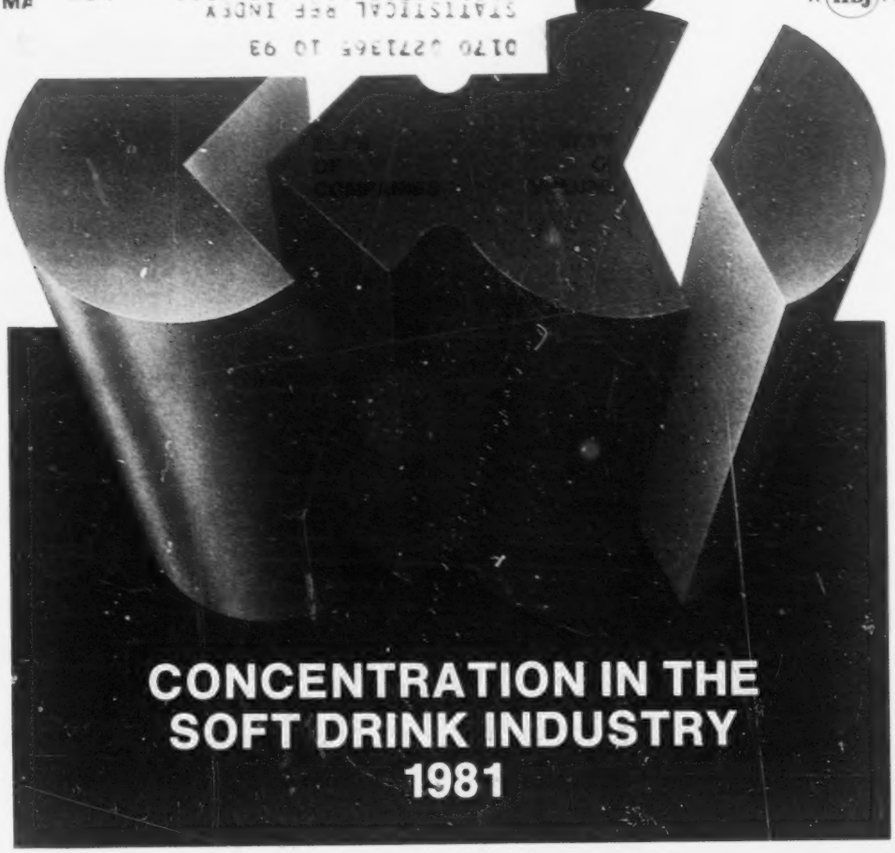

High-speed production to reduce .5-L PET costs

NEW YORK, NY—Though there are still problems to be worked out on the .5-L PET bottle, manufacturers are already gearing up for an expected boom in demand by putting high-speed blow molders on stream.

Shelf-life limitation is the primary concern for soft drink bottlers. To achieve acceptable results, most experts feel increased orientation and/or coatings will be required for the .5-L PET.

These improvements (the PVDC coating, for example, is in the experimental stage) will add to the bottle's cost and will limit its ability to compete with lower-priced glass containers. As a partial solution to this problem, bottle makers plan to greatly increase manufacturing speeds, thereby reducing per unit costs.

Targeted speed is 15,000 bph or more. At least three firms are either testing or have already installed such equipment.

Several years ago, Owens-Illinois gained exclusive U.S.

(Continued on page

Diet labels may require new format

WASHINGTON, DC—Diet soft drink makers may one day use a different nutrition labeling format now that the government plans to study the best means of conveying such information to the public.

The Food and Drug Administration will soon select a company to examine "the optimum level of information

(Continued on page 10)

Small minority of SD firms, 2.7%, account for 42% of total sales

By Paul E. Mullins, Editor

MINGO JUNCTION, OH—Acquisitions and mergers have become a daily part of both the soft drink and brewery industries. On the soft drink side, 33 companies controlled in excess of 42% of total sales last year. These companies—all with volumes in excess of $100 milion per year—represent 2.7% of the total number of companies currently involved in the business.

Their clout in the industry and who they are (*see page 13*) are revealed in a recent study from Beverage Marketing Corp., located here. Created from information stored in the firm's Beverage Data Bank, the study shows that there are some 260 multiple-plant operating firms and that these firms account for a total of 67.5% of total dollar sales.

The top two categories account for the bulk of these sales. In addition to the over $100 million category the next two, $50 million to $100 million and $25 million to $50 million, account for 11.9% and 6.6% of the total, respectively.

According to Michael Bellas, president of Beverage Marketing Corp., these three groups account for well over half, 60.8% to be specific, of total soft drink sales.

Although various sources have reported on the amount

(Continued on page 13)

BI Week

• Multi-acquisition struggle between Heublein and General Cinema may be over. Heublein has reached agreement in principle to be acquired by R. J. Reynolds. Reynolds will acquire approximately 52% of the firm's common stock at a price of $63 per share. At presstime, General Cinema officials had "no comment" pending its study of the specific acquisition study.

• New York Coke's introduction program for diet Coke will include 1 billion consumer ad impressions, 1.5 million discount coupons and 1 billion feature supermarket displays within a 12-month period. Company president, Ed O'Reilly told the group of

(Continued on page 17)

Pre-threaded PP closure caps new Plasti-Shield

TOLEDO, OH—Lighter-weight single service Plasti-Shield bottles, designed for use with a new pre-threaded, polypropylene closure, will be introduced this fall by Owens-Illinois, Inc., sole U.S. licensee for the H-C Industries closure.

The new 10 and 16 oz. Plasti-Shield bottles have achieved their weight reduction in a redesign of the bottle neck and finish, a change allowed by the pre-threaded closure which does not require the thickness of the standard 1650 finish for aluminum roll-on closures. Both the 10 and 16 oz. containers are nearly one-sixth inch shorter

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Contents

21.7% of SD firms produce 67.5% of vol.

In 1981, 42% of all soft drink sales were controlled by 33 companies. Those 33 companies, all of which have volumes of more than $100 million, comprise only 2.7% of all companies in the soft drink business. For more information on sales and volume in the soft drink industry, and what companies control it, see **page 1.**

New foam labels to be intro'd to mkt.

A new concept in foam labeling is being tested by the Lily-Tulip company. "Foam-a-Round" label is being tested by a number of bottle manufacturing companies and should be in commercial application within thirty days. The labels can be applied with regular roll-fed equipment. It will be positioned as an alternative to Plasti-Shield bottles. To read more about Lily-Tulips' labeling innovation, see **page 4.**

Will sugar substitutes alter sweetener market?

Will new low-calorie sweeteners poised to enter the U.S. market have an impact on saccharin? Yes, says John Maxwell, **BI's** research/statistics director. Maxwell predicts that Aspartame and other sugar substitutes will initially impact saccharin. The consumption of sugar and HFCS could also erode if the public accepts them as alternatives. Maxwell also expects some cannibalization as the substitutes start to appear on the domestic market. For a closer look at how alternative sweeteners could affect the market, see **page 4.**

O-I's bulk box to spur recycling

Owens-Illinois is hoping its new bulk-box system will spur soft drink bottlers and beer wholesalers to recycle glass containers. O-I's new system, which is designed to turn deadheading into money, will be used at 19 glass manufacturing plants throughout the country. Bulk cullet containers, made of Ultrastak corrugated material, figure prominently in the system. For more details on how to turn deadheading into dollars, see **page 14.**

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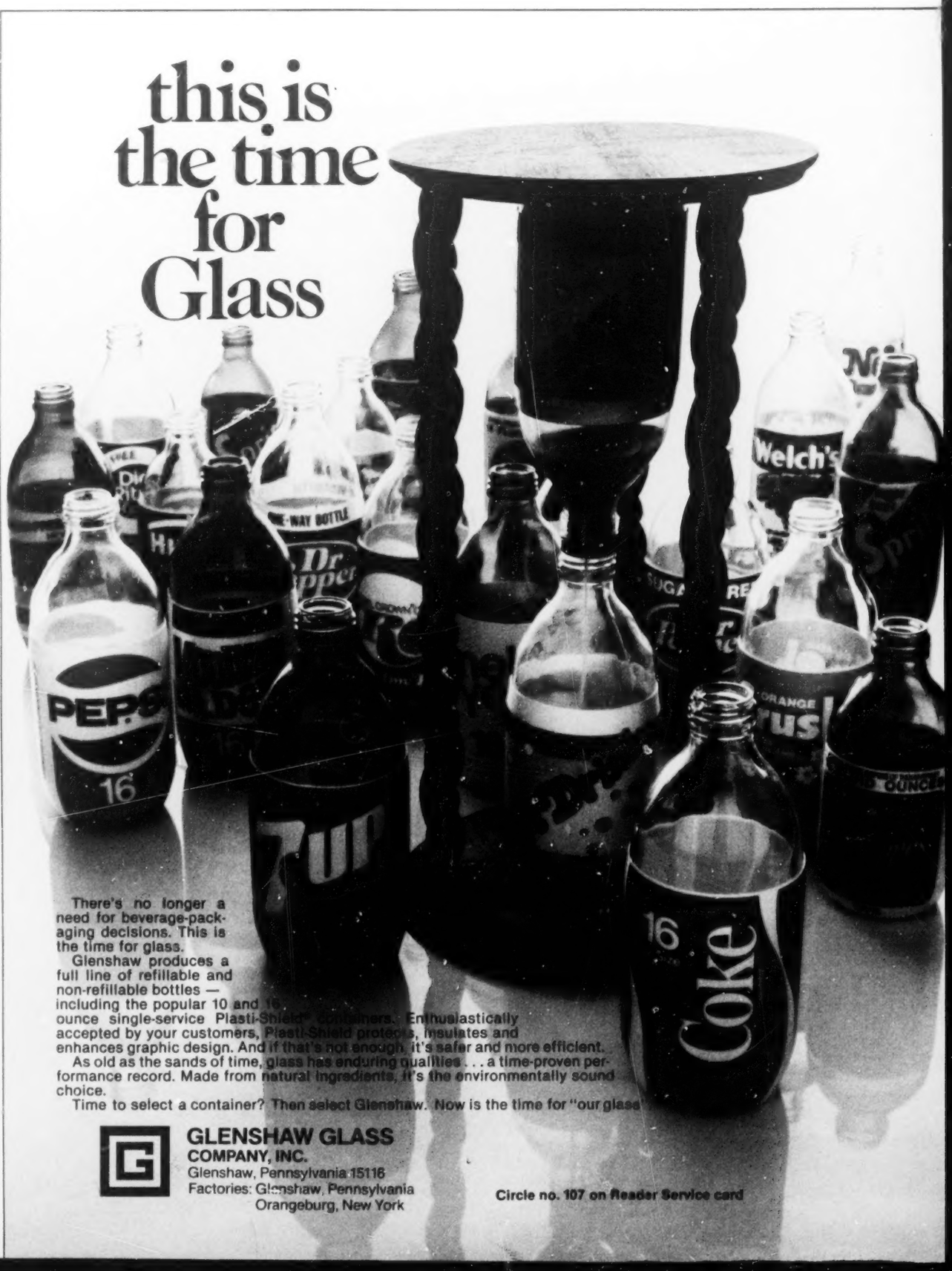
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SD study

(Continued from page 1)

of business controlled by franchisors through their company-owned plants, explained Bellas, no one has yet identified the other major factors in the soft drink business "... firms like All American Beverages and Coca-Cola Enterprises," he said.

The 260 companies are multiple plant operations. Altogether they have a total of 692 manufacturing (filling) locations—and 827 distribution points.

There are an additional 938 companies—all single manufacturing facility firms—which account for 32.5% of total dollar volume.

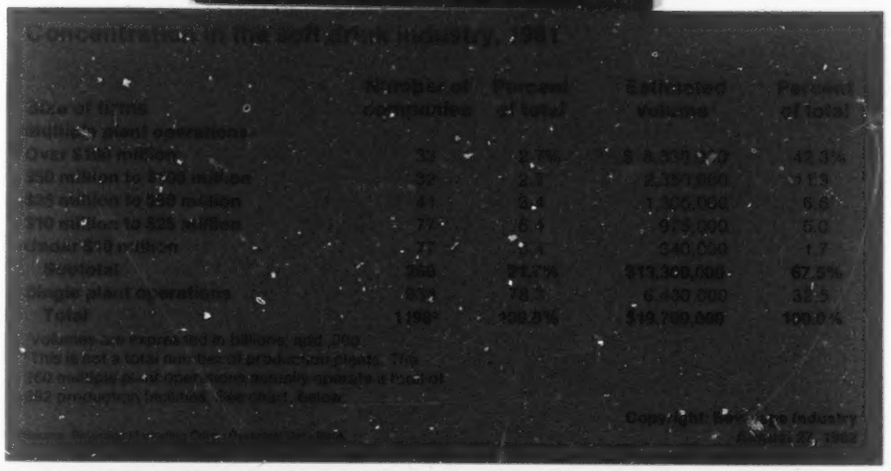
"These firms are on the decline," explains Bellas. "As our Beverage Data Bank collects historical information on the industry, we'll be able to project trends for this and the higher-volume groups."

The complete report—excerpted for this special report—also includes the names and address for all the multiple plant operations and each of their manufacturing and distribution centers.

Plants and distribution centers for all of the franchise firms are also detailed in the report.

Average volume per company of the multi-plant operations is $19.2 million each. Average volume for the single-plant operations is $6.8 million.

Copies of the study and additional information is available from Beverage Marketing Corp., 260 Commercial Ave., Mingo Junction, OH 43938; phone 614/598-4133 or in New York, 212/688-7640.



Concentration in the soft drink industry, 1981

Size of firms	Number of companies	Percent of total	Estimated volume	Percent of total
Multiple plant operations:				
Over $100 million	33	2.7%	$ 8,308,000	43.3%
$50 million to $100 million	32	2.3	2,331,000	11.5
$25 million to $50 million	41	3.1	1,300,000	6.6
$10 million to $25 million	77	6.1	973,000	5.0
Under $10 million	77	6.1	340,000	1.7
Subtotal	260	21.7%	$13,308,000	67.5%
Single plant operations	938	78.3	6,400,000	32.5
Total	1198*	100.0%	$19,700,000	100.0%

Volumes are expressed in billions and 000
*This is not a total number of production plants. The 260 multiple plant operations actually operate a total of 692 production facilities. See chart, below.

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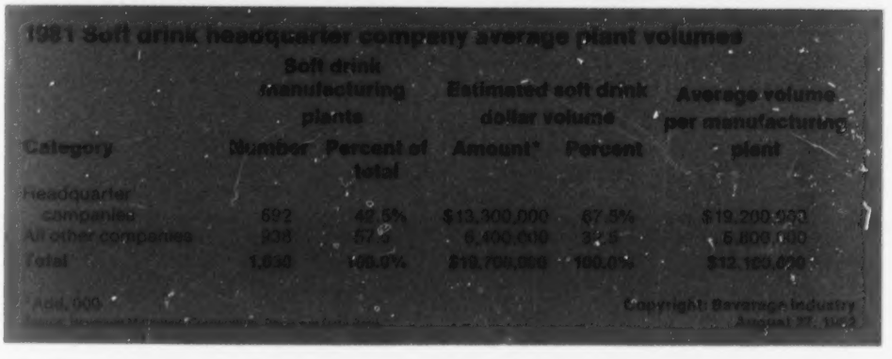

1981 Soft drink headquarter company average plant volumes

Category	Soft drink manufacturing plants: Number	Soft drink manufacturing plants: Percent of total	Estimated soft drink dollar volume: Amount*	Estimated soft drink dollar volume: Percent	Average volume per manufacturing plant
Headquarter companies	692	42.5%	$13,300,000	67.5%	$19,200,000
All other companies	938	57.5	6,400,000	32.5	6,800,000
Total	1,630	100.0%	$19,700,000	100.0%	$12,100,000

* Add 000

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Apple Juice debuted in aseptic Paper Bottle

PLYMOUTH, MA—Ocean Spray Cranberries, Inc. recently began marketing its own brand of aseptically-packaged apple juice to consumers throughout much of the Northeast.

Ocean Spray had originally planned to introduce Red Cheek Apple Juice last spring, however an agreement in principle between the two firms was never finalized. "We just couldn't reach an agreement on the strategies to be used for the product, so we went our separate ways," commented Christine Masclee, director, consumer affairs for Ocean Spray.

The package graphics have remained largely the same, the only changes being the absence of the Red Cheek name and the small tap pouring juice from an apple into a glass.

new flavors

The co-op also announced plans to add its Crangrape grape-cranberry drink to the Paper Bottle line, introduced in New York last winter (*see* **BI** *February 19, 1982, page 24*). The line already includes Cranberry Juice Cocktail, Cranapple cranberry-apple drink, Grapefruit Juice, and Pink Grapefruit Juice Cocktail.

Introductory apple juice markets encompass New England, and areas in and around New York City, Philadelphia, Albany, Buffalo, Syracuse, and Rochester.

Within three months, both apple juice and Crangrape are expected to be available in the current Paper Bottle markets, stretching from Virigina to Maine.

Little Lancers in nat'l. rollout

HARTFORD, CT—Lancers Wines has begun nationally marketing its "Little Lancers" 187 ml six-packs of white and rose wines.

Each 187 ml bottle has an easy-open, metal pull top. The bottles are a scaled down version of the famous crock-like bottle that has been identified with Lancers for many years.

"We decided to undertake the national marketing thrust based on the sixpack's successful 11 market test introduction," said Ronald B. Schlossberg, vice president-marketing for the Heublein Spirits Group, which imports and distributes Lancers in the U.S. "Consumer response to 'Little Lancers' in the test markets revealed that this packaging fits perfectly with today's lifestyles and multiple serving occasions," he added.

The "Little Lancers" 187 ml bottle has been marketed singly in selected areas since 1977.

The $100 million plus soft drink firms

All American Bottling Corp.
Coral Gables, FL
Allegheny Beverage Corp.
Baltimore, MD
Associated Coca-Cola Bottling
Daytona Beach, FL
Atlantic Soft Drink Co.
Columbia, SC
Beatrice Foods Co.
Chicago, IL
Beverage Management Inc.
Columbus, OH
Coca-Cola Bottling Co.
Coral Gables, FL
Coca-Cola Bottling Co.
Hackensack, NJ
Coca-Cola Bottling Co.
Niles, IL
Coca-Cola Bottling Co.
San Antonio, TX
Coca-Cola U S A
Atlanta, GA
Consolidated Coca-Cola
Charlotte, NC
Dr Pepper Co.
Dallas, TX
G&J Pepsi-Cola Bottlers
Cincinnati, OH
G C C Beverages Inc.
Boston, MA
Honickman Affiliates
Philadelphia, PA
Hygeia Coca-Cola Bottling
Pensacola, FL
Johnston Coca-Cola Bottling
Cleveland, TN
Joyce Beverages Inc.
New Rochelle, NY
J.T. Lupton Enterprises
Chattanooga, TN
M E I Corp.
Minneapolis, MN
Mid-Atlantic Coca-Cola
Mc Lean, VA
Mid-Continent Bottlers
Des Moines, IA
New Century Beverage Corp.
San Francisco, CA
Pepcom Industries, Inc.
Garden City, NY
Pepsi-Cola Bottling Group
Purchase, NY
Pepsi-Cola General Bottling
Chicago, IL
R K O Bottlers Inc.
Fort Wayne, IN
Royal Crown Cola Co.s
Rolling Meadows, IL
Seven-up USA, Inc.
St. Louis, MO
Shasta Beverage Inc.
Hayward, CA
Westinghouse Co.
Pittsburgh, PA
Wometco Enterprises, Inc.
Miami, FL

SOFT DRINKS □ BEER □ BOTTLED WATER □ WINE □ POWDERS □ JUICES □ SPIRITS

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Beverage Industry

MARKETING □ DISTRIBUTION □ TECHNOLOGY

A HBJ PUBLICATION

Lily-Tulip foam concept permits roll-fed labeling

TOLEDO, OH—A new foam labeling concept currently being tested by Lily-Tulip would make it possible for bottlers or bottle manufacturers to apply polystyrene foam body labels using conventional roll-fed labelers.

The "Foam-a-Round" label, announced recently by Lily-Tulip (formerly a division of Owens-Illinois), is being tested by a number of bottle manufacturers and is expected to be in commercial application within 30 days.

An official with the company told **Beverage Industry** that the new label will be positioned as an alternative to Plasti-Shield and will be targeted to markets where paper/polyethylene labels are used. The labels can be applied with conventional roll-fed, hot melt, labeling equipment at speeds equal to poly/paper laminates. According to the company official, there have been no problems in applying hot melt adhesive to the foam labels.

Because the foam does not extend below the heel of the bottle, the company reports smoother transport on manufacturing and filling lines.

"In a bottling plant, bottles with paper/polyethylene labels reportedly run 20% faster than Plasti-Shield," the official said. "So far in tests, Foam-a-Round labeled bottles are performing at the same speeds as the paper/poly ones."

First user is Knudsen Dairy which is applying the labels to its self-manufactured HDPE juice bottles. The labels are reportedly being applied on a B&H labeler.

Foam-a-Round called "alternative to Plasti-Shield."

The price of the polystyrene foam labels will be competitive with paper/poly and, said the official, less than Plasti-Shield.

● For more information on **Foam-a-Round** labels, circle no. 501 on reader service card.

New low-cal sweeteners to affect saccharin use

By Robert Kreutzer
Senior Editor

SPECIAL REPORT—New low-calorie sweeteners currently entering the domestic market will probably not affect consumption of high-fructose corn syrup in the near term. However, the new sweeteners will initially impact saccharin consumption. So predicts John C. Maxwell, **BI's** director of research/statistics in his latest update on sugar and HFCS.

If consumers accept new low-calorie sweeteners as good-tasting alternatives to nutritive sweeteners, then sugar and HFCS consumption will begin to erode. But, this shouldn't occur for at least two or three years, says Maxwell.

U.S. sugar consumption continued a decline in absolute tonnage as well as per capita consumption in 1981. On a per capita basis, HFCS has absorbed virtually all of the sugar consumption decline. However, Maxwell expects some cannabilization in the domestic market as aspartame and other sugar substitutes become accepted and available. Aspartame's FDA approval in the U.S. is currently only for dry products.

Also on the horizon are "L-sugars" or "left-handed" sugars. These are identical in taste and chemical composition to their "right-handed" counterparts, which are in current widespread use. L-sugars are not metabolized, and therefore will be neither fattening nor cavity causing.

Since L-sugars are expected to have the same properties

(Continued on page 6)

Shipments up for spirits due to imports

NEW YORK, NY—About 460 million gallons of distilled spirits were shipped domestically in 1981, 0.4% or about a million gallons above 1980, according to Impact Databank.

Imports, with 30% of the market, were up last year to 140 million gallons and accounted for the slight overall rise in shipments. Domestic distilled spirits were off 1.4% to 320 million gallons.

Impact says the real action took place in the specialties category (cordials/liqueurs, brandy and prepared cocktails). Imported liqueurs and Cognacs, two premium spirits types, showed surprising growth, considering a sluggish U.S. economy.

Whiskey shipments were off in 1981 by 0.8% to 205 million gallons, or a 44.5% market share. Traditionally the largest spirits segment, whiskey has been declining for the past ten years.

Whiskey's decline is based on fewer shipments to the domestic market. In 1970, whiskey held 41% of the total distilled spirits market; last year it was down to 22.2%. Domestic whiskeys (bourbon and blends or rye) have declined about 4% per year throughout the 1970s, losing 57 million gallons, according to Impact. Shipments in this segment fell further 1980-'81, 3.7% to 102 million gallons.

Imported whiskeys outpaced domestic for the first time since Repeal, by a million gallons last year. Canadian whiskeys, which have fared

(Continued on page 18)

Distilled spirits entering U.S. trade channels

(millions of gallons — rounded)

Type	1960	1970	1975	1980	1981	Average annual compound growth rate 1960-70	1970-75	1975-80	Percent change 1980-81
Bourbon	69	85	77	66	66	2.1%	-2.0%	-3.0%	0.8%
Blends	74	74	58	40	36	—	-4.8	-7.2	-10.9
Scotch	21	52	56	47	47	9.6	1.6	-3.5	1.2
Canadian	13	34	49	53	55	10.4	7.7	1.7	2.6
Irish	*	*	*	*	1	—	—	—	62.7
Total Whiskey	177	245	240	207	205	3.3	-0.4	-2.9	-10.8
Gin	23	39	44	43	43	5.4	2.4	-0.5	0.1
Vodka	19	50	87	98	98	10.2	11.7	2.4	-0.4
Rum	4	14	18	33	33	13.3	5.2	12.9	-0.6
Tequila	*	1	7	7	8	+	43.1	1.2	11.2
Total White Goods	46	104	155	181	181	8.5	8.3	3.1	0.1
Brandy	6	15	15	19	20	9.6	—	4.8	5.2
Cordials & Liqueurs	NA	NA	NA	42	46	—	—	—	9.9
Cocktails & Mixed Drinks	NA	NA	NA	10	8	—	—	—	-19.9
Total Specialties	16	39	51	71	74	9.3	5.5	6.8	4.3
Total Distilled Spirits[1]	240	388	446	459	460	4.9%	2.8%	0.6%	0.4%

* Less than ½ million gallons.
[1] Addition of columns may not agree because of rounding.
Source: BATF, NABI, and IMPACT DATABANK

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Schmidt's can salutes plant at Cleveland

PHILADELPHIA, PA—Christian Schmidt Brewing Company located here, has introduced a commemorative beer can in a salute to its plant city of Cleveland, OH.

The 12 oz. standard Schmidt's can, made in Cleveland, now devotes its back panel to a reproduction of that city's historic and most famous landmark, The Terminal Tower. A headline reads "Schmidt's Salutes Cleveland."

The special cans are being made for the balance of 1982; they'll be distributed throughout the Cleveland marketing area by seven Schmidt's wholesalers.

The cans tie in with Schmidt's observance of its 10th anniversary at its present location. The company first estabished a plant in Cleveland in 1964. It acquired the previous Carling plant in 1971, completely modernized it and began operations there in 1972.

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Spirits

(Continued from page 4)

well all during the past decade, had the biggest volume increase among all brown spirits last year, up 2.6% to 55 million gallons. Of total imports of Canadian whiskey in 1981, 38% was bottled-in-Canada and 62% was imported in bulk and bottled in the U.S.

Impact figures show the white goods segment was stable in 1981, after a 2.9% decline in 1980. Last year, white goods accounted for 39.4% of the total distilled spirits market, with 181 million gallons shipped.

Impact believes that the rapid growth experienced by white goods in the '70s has come to an end. "The phenomenal success of white table wine in recent years has definitely eroded white goods' share of the cocktail market in America," Impact says.

Among white goods' categories, gin was stable last year at 43 million gallons. Gin was off 4.5% in 1980. Vodka was flat last year. Imported vodkas, led by market leader Stolichnaya, reached 1.8 million gallons shipped in 1981, up 49.4%.

Shipments of rum, which had been steadily up for the past two decades, were stable last year at 33 million gallons, 7.1% of total spirits. Rum seems to have been least affected by the white wine cocktail boom, according to Impact. Bacardi brand, the undisputed leader, was up 1% in 1981.

Tequila growth was strong last year, with an 11.2% increase and a new high of 8 million gallons. Tequila experienced astonishing growth in the early 70s, reaching 7 million gallons by 1975. It has taken tequila six years to add another million gallons in shipments.

Specialties were the most exciting spirits category in 1981, with a 4.3% gain to 74 million gallons shipped, and a 16.1% share of the total market. Cordials and liqueurs, the largest specialty segment, grew 9.9% last year to 46 million gallons, or a tenth of the total distilled spirits market. Imported liqueurs were up even higher, to 13.8 million gallons, or 18.7% above 1980.

Cream liqueurs accounted for most of this success, according to Impact. "The success of creams, many of which use Irish whiskey in their blending mix, accounts more than pure Irish whiskey gains, for the 98.5% increase in imports of distilled spirits from Ireland last year."

Brandies rose 5.2% last year, to 20 million gallons, most of this gain represented by imports.

Overall, says Impact, the 1981 distilled spirits market belonged to the imports, especially the liqueurs and Cognacs. "While it is now accepted," Impact says, "that distilled spirits market growth is likely to be slow in the eighties compared to both beer and the very dynamic wine market, there are also going to be pockets of new opportunity within the market."

Distilled spirits entering distribution channels by type

Type	1960	1970	1975	1980	1981
Whisky					
Scotch	55.4%	53.1%	44.5%	35.0%	33.8%
Canadian	33.9	34.9	39.2	39.8	39.0
Total Whisky (Includes Irish)	89.3	88.4	83.9	75.1	73.4
White Goods					
Gin	3.0	4.0	3.8	4.6	4.1
Vodka	*	0.1	0.2	0.9	1.3
Rum (Not including P.R.&V.I.)	0.5	0.4	0.6	1.0	0.9
Tequila	0.3	1.1	5.3	5.2	5.6
Total White Goods	3.8	5.6	9.8	11.7	11.8
Specialties					
Brandy	4.8	2.8	2.2	4.6	5.0
Cordials & Liqueurs	2.2	3.3	4.1	8.7	9.9
Total Specialties	7.0	6.1	6.3	13.2	14.9
Total Imports	100.0%	100.0%	100.0%	100.0%	100.0%

*Less than 0.1%.
Source: IMPACT DATABANK

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USBA supports penalties for false ID's

WASHINGTON, DC — The United States Brewers Assn. recently testified in support of a bill that would impose criminal penalties on manufacturers of false identifications bearing false birthdates.

"Purchases of malt beverages by underage persons presents an issue of deep concern to the brewing industry," says Don Shea, USBA vice president and director of Alcohol Programs Div.

Bill S.2043 would enable the industry to more effectively reduce the number of documents bearing unverified, false birthdates at the disposal of minors, he says. It would provide retailers with a means for preventing sale of alcohol to minors.

Also associated with false i.d.s are alcohol-related traffic accidents among this age group, according to Shea.

"The combination of drinking and driving by these young persons represents a dangerous combination," he says. "S.2043 could well play a significant role in diminishing traffic accidents by greatly reducing the identification cards which facilitate their purchases of alcoholic beverages."

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Shasta intro's three flavors

HAYWARD, CA—Three new flavors are being added to Shasta's line of regular and diet soft drinks, according to Alfred A. Piergallini, senior vice president of marketing.

Dr. Diablo, Citrus Mist and Redberry will begin to appear on market shelves in July, in 12 and 16 oz. non-returnable bottles.

Cecil Lowry, vice president of science and technology, describes Dr. Diablo as a spicy pepper-type drink, which will compete in one of the fastest growing flavor categories.

Citrus Mist, targeted against the young adult market, is a low carbonated soft drink which combines the flavors of limes, lemons and other citrus.

Redberry, a berry flavor fruit taste, enters the popular Midwest red-pop category.

• For information on **Shasta,** circle no. 502 on reader service card.

Sweeteners

(Continued from page 4)

as sugar (sweetness, bulk, brownability), uses should be identical. This product has not, however, been safety tested; FDA approval appears to be several years away. The current price for L-sugar is about $2.00 per pound. Maxwell says that unless this price can be brought down substantially, demand could be sluggish after FDA approval.

There is also a German-made (Hoechst) sweetener called acesulfame-K, for which FDA is expected to be petitioned soon (*see "Aspartame vs. acesulfame-K," page 14*). This product is 150-200 times sweeter than sugar. It is similar to saccharin, but is believed to have a slightly better taste, along with better stability under heat and acid conditions. Acesulfame-K is absorbed by the body, but is not metabolized. It has been successfully tested for safety in Europe.

Foreign tests aren't currently accepted by FDA, but a new proposal could reverse this ban, Maxwell reports, paving the way for quicker domestic approval. Pricewise, acesulfame-K would be preferable to aspartame, and it can be used in a wider variety of applications. Maxwell predicts strong competition between aspartame and acesulfame-K.

sweetener combinations

There has been speculation, Maxwell says, on the future use of nutritive-nonnutritive sweetener combinations. Two possibly conflicting FDA rules govern this. One states that low-calorie foods may contain a combination of sweeteners, unless an even lower calorie count can be achieved through use of a nonnutritive sweetener alone (for example, in soft drinks that are made with 100% saccharin). The other FDA rule says that the amount of nonnutritive sweetener used in a combination must be at least 50% of the total weight of the nutritive sweetener that would be needed if the latter were used alone.

The U.S. corn crop for the '81-'82 year (which runs October through September) is estimated at 7.7 billion bushels. That is 6% lower than last year's 8.2 billion bushel total, according to Maxwell's statistics. However, he says, with beginning stocks of a billion bushels and the comparatively large crop, supplies will be adequate.

The current year's market price, which is for corn harvested from the 1980-81 crop, should average $2.45 to $2.55 a bushel, compared with $3.11 in 1980-81. Maxwell says the price decline results from last year's large crop. The 1982-83 corn price is estimated to sell at $2.50 to $2.90 per bushel. This will represent corn harvested from the 1981-82 crop. Carryover at the start of that market period, Maxwell says, should be about 2 billion bushels.

Maxwell estimates total capacity utilization in the HFCS industry at 83.1% for 1982. This reflects 95% utilization for the first generation (42% fructose) product and 73% for the second generation (55% fructose).

Capacity for 55% fructose will increase 7% this year, with shipments rising 48%, Maxwell says. In 1983, 55%

(Continued on page 14)

Allowable usage levels for HFCS vs. sucrose in 1981

Company & Flavor	Sucrose* and 42% HFCS	Sucrose* and 55% HFCS
Coca-Cola		
Coke	100% Sucrose	50/50
Sprite, Fanta, Orange, Hi C	75/25	100% HFCS
Mr. Pibb, Other Allied Products	50/50	100% HFCS
Pepsi Co		
Pepsi	100% Sucrose	50/50#
Mountain Dew	—	100% HFCS
Teem	50/50	100% HFCS
Patio Flavors	100% HFCS	100% HFCS
Seven-Up (Philip Morris)		
7UP	75/25	100% HFCS
Howdy Flavors	75/25	100% HFCS
Quirst	75/25	100% HFCS
Dr Pepper		
Dr Pepper	100% HFCS	100% HFCS
Royal Crown		
RC Cola	75/25	50/50
Nehi Flavors	100% HFCS	100% HFCS
Canada Dry (Norton Simon)		
Barrelhead	50/50	50/50
Wink	50/50	50/50
Flavors	100% HFCS	100% HFCS
Ginger Ale	75/25	75/25
Crush International		
Hires	100% HFCS	100% HFCS
Crush	100% HFCS	100% HFCS
Sundrop	100% HFCS	100% HFCS
Shasta (Consolidated Foods)	—	100% HFCS
Monarch	50/50	25/75
Dad's Root Beer (IC Industries)		
Dad's Root Beer	100% HFCS	100% HFCS
Bubble Up	100% HFCS	100% HFCS
Cadbury Schweppes		
Tonic	76/24	—
Ginger Ale	76/24	—
Flavors	100% HFCS	—
Squirt	100% HFCS	100% HFCS
Welch	100% HFCS	100% HFCS
Lipton	50/50	25/75
Nestle		
Nestea	100% HFCS	100% HFCS
Sunkist Orange	75/25	75/25

In fountain syrup only

* Where both HFCS and sucrose are used in combination, the sucrose percentage appears first: e.g. 76/24 indicates a 76% sucrose content.

Source: John Maxwell, Lehman Bros. Kuhn Loeb Research

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Domestic sugar and HFCS consumption

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Sugar (000 short tons raw)	11,345	11,487	11,429	10,945	10,302	10,893	11,099	10,889	10,756	10,189	9,770
HFCS (000 tons, dry)	95.0	131.5	218.2	316.9	530.6	786.1	1,038.0	1,358.8	1,731.0	2,174.0	2,675.0
Per Capita (lbs.)											
Total Sugar	102.1	102.3	100.8	95.6	89.1	93.4	94.2	91.5	89.3	83.7	79.4
HFCS	0.9	1.3	2.1	3.0	5.0	7.2	9.5	12.1	15.4	19.1	23.1
Total	**103.0**	**103.6**	**102.9**	**98.6**	**94.1**	**100.6**	**103.7**	**103.6**	**104.7**	**102.8**	**102.5**

Source: John Maxwell, Lehman Bros. Kuhn Loeb Research

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Comparative sweetener costs based on a range of aspartame prices

Cost per pound			Ounces needed for standard soft drink case			Cost per case		
Sugar	Saccharin	Aspartame	Sugar	Saccharin	Aspartame	Sugar	Saccharin	Aspartame
$0.18	$4.00	$90.00	10.49	0.0350	0.0525	$0.118	$0.009	$0.295
0.18	4.00	80.00	10.49	0.0350	0.0525	0.118	0.009	0.263
0.18	4.00	70.00	10.49	0.0350	0.0525	0.118	0.009	0.230
0.18	4.00	50.00	10.49	0.0350	0.0525	0.118	0.009	0.164
0.18	4.00	45.00	10.49	0.0350	0.0525	0.118	0.009	0.148

Source: John Maxwell, Lehman Bros. Kuhn Loeb Research

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Aspartame vs. acesulfame-K

Diet soft drinks represent an immense potential market for new low-calorie sweeteners. Searle, aspartame's maker, is touting that product as the next generation low-cal sweetener for beverages. The company has some good reasons for its optimism. But, acesulfame-K, from Hoechst, looms as a strong competitor.

The pros and cons of aspartame work out this way: the product is generally considered an excellent-tasting sweetener, with no aftertaste (an important attribute since soft drinks are promoted mainly on the basis of taste-appeal).

Aspartame is expected to be approved by FDA for U.S. soft drinks sooner than acesulfame-K is, simply by virtue of its earlier petitioning.

Aspartame's current problem's are two-fold: average shelf-life, without refrigeration, is four months; and aspartame is expensive, $90/lb. (versus saccharin at $4/lb.). Searle says that by the end of 1982, it can get the price down to $60/lb.

prohibitive price

If aspartame was approved for soft drinks at the end of this year, its price would probably be prohibitively high, even if used in combination with another sweetener. The reason for the high cost? Aspartame is expensive to make because its molecule is extremely complex.

Acesulfame-K is a derivitive of acetoacetic acid. While acetoacetic acid plays a role in the body's metabolic system, acesulfame-K is still a totally synthetic product. Aspartame, based on amino acids, could be marketed as an "all natural" sweetener; acesulfame-K could not.

Acesulfame-K's molecule is relatively simple, so production is uncomplicated. Searle makes aspartame in the U.S., while acesulfame-K production is currently limited to W. Germany. However, if markets open up, Hoechst could begin making acesulfame-K here.

In any case, at present, acesulfame-K has a price advantage. It is said to cost $15/lb.—more than saccharin, but less than aspartame.

Acesulfame-K could be used in combination with other sweeteners. But, it could also be used alone, since it is considered price competitive with saccharin. Saccharin is still safety-suspect in many quarters and warning labels are required. (It can be assumed that neither aspartame nor acesulfame-K would require warning labels on soft drinks.)

It is possible that saccharin could suffer the same fate as cyclamate. In that case, acesulfame-K's position would be enhanced, since pricewise, it's the more realistic substitute for saccharin and it reportedly has no aftertaste.

This year, Hoechst will petition FDA to approve acesulfame-K as a table-top sweetener, as aspartame is used now.

Hoechst has already petitioned the British government to approve acesulfame-K for table-top use. Early in 1983, the company plans to petition for use in soft drinks. Sources indicate a strong possibility of quick success on both these petitions in England.

As with aspartame or any of the new low-calorie sweeteners, domestic soft drink franchise companies have requested and received samples of acesulfame-K, and reportedly are developing possible formulations.

Bulk box system turns deadheading into money

TOLEDO, OH—A new, bulk-box system designed to stimulate public recycling of glass containers by soft drink bottlers and beer wholesalers has been introduced by Owens-Illinois, Inc. It will be used at its 19 glass manufacturing plants across the country.

Don G. Glover, vice president of the O-I Glass Container Division and manager of corporate and divisional recycling, said the new system amounts to "an easy, economical way to turn deadheading into money." He also said that soft drink bottlers and beer distributors can achieve community-relations benefits by establishing or extending buy-back recycling operations for the public.

The system is built around the bulk cullet container, an Ultrabin box made of O-I's high-compression Ultrastak corrugated material. The reusable triplewall box has a 36 cu. ft. capacity, and can hold up to 800 pounds of unbroken bottles and jars or up to 2,200 lbs. of processed, or broken, glass containers.

Assembled and set on a pallet, the box becomes a glass container collection, handling, and transportation system in one, Glover said. Boxes designed to fit standard 40 by 48 inch GMA pallets are in use now, and a style designed for 32 by 37 inch pallets will be available soon.

Compared to conventional methods for recycling glass, the new O-I system reduces transportation costs, offers three-color glass separation capability without added costs for container rentals or extra handling, and provides economies that make glass container recycling attractive even to smaller-volume recyclers, according to Glover.

advantages

"It is an ideal system for soft drink bottlers and beer distributors," he stated. "All you need is transportation for backhauls to an O-I glass container plant, 20 to 30 bulk cullet containers, and an equal number of pallets."

Then, instead of deadheading to the glass plant for bottles or to a nearby brewery for filled containers, soft drink bottlers and beer wholesalers can ship income-producing loads. When a truckload quantity of bulk boxes is filled with reclaimed glass, the recycler simply loads the boxes onto a truck and ships them to the O-I glass container manufacturing plant.

Each of the company's plants is equipped with a spe-

Sweeteners

(Continued from page 6)

capacity should increase 21%. As of June 14, 1982, Nabisco Brands essentially left the fructose business by leasing its facilities to ADM for 13 years. ADM will probably not begin production with the additional capacity until next year. A.E. Staley is also adding capacity in 1983 at a Louden, TN plant. This will bring the company's total to 2.1 billion pounds, dry basis, Maxwell says.

Currently, the domestic price for raw sugar is more than twice the world level, or 17 cents, compared to 7 cents. World sugar production is higher than consumption, with the 1981-82 estimate at 97.2 million metric tons. Consumption for the same period is estimated at 91 million tons, pushing stocks to about 30% of consumption, according to Maxwell.

In 1982-83, world production should fall from this year's record high to 95 million metric tons, but should outpace consumption, estimated at 93.5 million tons.

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Beverage Business Indicators

Glass container shipments

(thousands of gross)
(not seasonally adjusted)

	Jan. '82	Feb. '82	% change
Bottles-Total	24,457	22,714	(7.1)
Beverage:			
refillable	208	269	29.3
nonrefillable	3,409	3,758	10.2
under 10 oz.	109	64	(41.3)
10.0 to 15.9 oz	988	1,239	25.4
16.0 to 16.9 oz (includes .5-L)	2,060	2,233	8.4
17.0 to 33.9 oz (includes 1-L)	252	222	(12.0)
34.0 oz. and over (includes 2-L)	—	—	—
Beer:			
refillable	213	270	26.8
nonrefillable	8,305	7,757	(6.6)
under 11 oz	1,321	1,305	(1.2)
11.0 to 15.9 oz	6,482	5,883	(9.2)
16.0 and over	502	569	13.3
Liquor:	1,282	916	(28.5)
Under 125 ml (4.23 oz and under)	126	87	(31.0)
126 to 275 ml (4.24 to 9.3 oz)	348	194	(44.3)
276 to 500 ml (9.31 to 16.9 oz)	198	120	(39.4)
501 to 800 ml (16.91 to 27.04 oz)	245	204	(16.7)
801 to 1000 ml (27.05 to 33.80 oz)	245	190	(22.4)
1001 ml and over	120	121	0.8
Wine:	193	596	208.8
126 to 500 ml (4.24 to 16.9 oz)	117	93	(20.5)
501 to 800 ml (16.91 to 27.04 oz)	369	288	(22.0)
801 to 1000 ml (27.05 to 33.8 oz)	17	11	(35.3)
1001 to 1600 ml (33.81 to 54.08 oz)	190	122	(35.8)
Over 1600 ml (over 54.08 oz)	100	82	(18.0)

Source: U.S. Dept. of Commerce
Bureau of the Census

Closures for beverages

	Feb. '82	March '82	% change
Metal (for spirits, wines)	56,556	44,682	(21.0)
Plastic (for spirits, wines)	132,743	139,456	5.1
Metal crowns (beer and soft drinks)	19,913	21,953	10.2
Soft drink (convenience types)	2,052	2,205	7.5
Soft drink (conventional types)	6,604	6,523	(1.2)
Beer (convenience types)	8,797	10,292	17.0
Beer (conventional types)	2,460	2,888	17.4
All other metal closures other than crowns	5,998	7.053	17.6

Source: U.S. Dept. of Commerce
Bureau of the Census

Imported beverages

(Proof gals)

	March '82	April '82	% change
Beer*	24,957,576	13,086,224	(47.6)
Whiskey	8,978,343	5,914,454	(34.1)
Brandy	840,960	389,682	(53.7)
Gin	574,979	359,224	(37.5)
Rum	70,272	71,000	1.0
Cordials and liqueurs	1,239,323	683,136	(44.9)
Others	1,117,034	548,803	(50.9)
Total	**37,778,487**	**21,052,523**	**(44.3)**
Sparkling wines	987,571	524,089	(46.9)
Still wines, table	16,381,289	7,515,613	(54.1)
Still wines, fortified	314,763	173,870	(44.8)
Vermouth	453,917	249,767	(45.0)

* Includes ale, stout, porter
Source: National Association of Beverage Importers, Inc

Selected Consumer Price Index

(The year 1967 equals 100)

	Dec. '81	Jan. '82	% change
Cola	295.7	302.4	2.3
Other carbonated soft drinks	137.2	141.9	3.4
Noncarbonated drinks	137.1	138.0	0.7
Wine	203.5	205.0	0.7
Beer and ale	238.0	232.2	(2.4)

Sweetener data

(Cents per pound, dry basis)

	Dec. '81	Jan. '82	% change
HFCS wholesale prices			
California	20.21	16.90	(16.4)
New York	19.72	15.49	(21.5)
Chicago-West	19.72	14.08	(28.6)
Beet sugar wholesale prices	26.39	—	—
Dextrose wholesale prices			
California	28.64	28.64	0.0
New York	27.17	27.17	0.0
Chicago-West	27.17	27.17	0.0

Source: U.S. Dept. of Agriculture

Domestic beer removals

(Barrels of 31 gals)

	Dec. '81	Jan. '82	% change
Bottles and cans	11,259,178	10,380,589	(7.8)
Barrels and kegs	1,648,054	1,523,023	(7.6)
For export	199,926	185,416	(7.3)
Other	12,907	21,985	70.3
Total	**13,120,065**	**12,120,013**	**(7.6)**

Source: U.S. Dept. of the Treasury
Bureau of Alcohol, Tobacco and Firearms

Domestic wine removals

(Wine gals)

	Dec. '81	Jan. '82	% change
Still wines (bulk)	158,581	131,423	(17.1)
Still wines (bottled)	30,804,093	30,051,476	(2.4)
Effervescent wines (bulk & bottled)	2,724,113	1,266,034	(53.5)
Total	**33,686,787**	**31,448,933**	**(6.6)**

Source: U.S. Dept. of the Treasury
Bureau of Alcohol, Tobacco and Firearms

Domestic spirits removals

(Wine gals)

	Sept. '81	Oct. '81	% change
Whiskey	14,272,681	17,910,638	25.5
Brandy	1,200,650	1,595,603	32.9
Rum	2,127,667	2,347,808	10.3
Gin	3,307,410	2,970,727	(10.2)
Vodka	8,380,937	8,735,824	4.2
Cordials and liqueurs	3,002,165	3,548,523	18.2
Cocktails and mixed drinks	804,096	652,521	(18.9)
Total	**33,095,606**	**37,761,644**	**14.1**

Source: U.S. Dept. of the Treasury
Bureau of Alcohol, Tobacco and Firearms

Blow-molded plastic bottle production

(thousands of units)

	Jan. '82	Feb. '82	% change
Plastic bottles (blow-molded)	1,170,063	1,189,008	1.7
Carbonated beverages	165,865	157,031	(5.3)

Source: U.S. Dept. of Commerce
Bureau of the Census

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